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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,865	04/10/2001	Mark T. Corl	2916-0128P	6950

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EXAMINER	
SALTARELLI, DOMINIC D	

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/828,865	CORL, MARK T.	
	Examiner	Art Unit	
	Dominic D. Saltarelli	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,6,9 and 11-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,6,9 and 11-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 27, 2006 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 4, 6, 9, and 11-27 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 26 and 27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A claim directed to a signal, *per se*, is not considered by the office to fall under a statutory category, regardless of the form or nature of the signal, including placement upon a computer readable medium.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 4, 6, 9, and 11-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Program Guide for Digital Television ATSC Standard A/65 [ATSC] in view of Arsenault et al. (6,658,661, of record) [Arsenault] and Waldroup (5,077,828).

Regarding claims 1 and 13, ATSC discloses, for a digital television packet stream having a plurality of different types of tables, a method to determine issuance intervals for a plurality of event information tables (EITs) to be transmitted in sequence (pages 12 and 45), wherein the EIT are assigned to cover different ranges of broadcasting time (page 30), and an issuance interval for an EIT is a period at which the corresponding EIT is issued. ATSC further discloses including extended text tables (ETTs), wherein the ETTs contain program description information associated with the EITs respectively (pages 12-13 and 33).

ATSC fails to disclose setting the issuance intervals for the EITs, respectively, to be non-uniform based on the range of broadcasting time which each of the EITs is assigned to cover, wherein among the EITs, the issuance interval for an EIT covering a range of broadcasting time nearer a current time is set to be less than the issuance interval for an EIT covering a range of

broadcasting time further in the future and setting a uniform issuance interval for a plurality of ETTs to be transmitted in sequence.

In an analogous art, Arsenault teaches setting the issuance intervals for program guide data, respectively, to be non-uniform based on the range of broadcasting time which the program guide data is assigned to cover, wherein the issuance interval for program guide data covering a range of broadcasting time nearer a current time is set to be less than the issuance interval for program guide data covering a range of broadcasting time further in the future (col. 7, lines 23-67), providing more efficient broadcasting of program guide data (col. 7, lines 23-25).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by ATSC to include setting the issuance intervals for program guide data, respectively, to be non-uniform based on the range of broadcasting time which the program guide data is assigned to cover, wherein the issuance interval for program guide data covering a range of broadcasting time nearer a current time is set to be less than the issuance interval for program guide data covering a range of broadcasting time further in the future, as taught by Arsenault, wherein program guide data is described in EITs, providing the benefit of more efficient broadcasting of program guide data.

ATSC and Arsenault fail to disclose setting a uniform issuance interval for a plurality of ETTs to be transmitted in sequence.

In an analogous art, Waldroup teaches sending table data at periodic intervals to maintain current records of said data at a receiver (col. 7, lines 45-60).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by ATSC and Arsenault to send table data at periodic intervals, as taught by Waldroup, wherein the table data are the ETTs disclosed by the ATSC, for the benefit of maintaining current records of said data at a receiver.

Regarding claims 4 and 9, ATSC discloses, for a digital television packet stream having a plurality of different types of tables, a method to determine issuance intervals for a plurality of event information tables (EITs) (pages 12 and 45). ATSC further discloses including extended text tables (ETTs), wherein the ETTs contain program description information associated with the EITs respectively (pages 12-13 and 33).

ATSC fails to disclose setting the issuance intervals for the EITs, respectively, to be non-uniform, wherein an issuance interval between any two adjacent instances of an i^{th} EIT is determined according to the following equation:

interval(i^{th} EIT) = root_time + (increment_time)*i,

wherein interval(i^{th} EIT) is the interval between any two adjacent instances of the i^{th} EIT, root_time is a predetermined interval for the EIT corresponding most closely in time to the present, increment_time is a non-zero integer, and

setting a uniform issuance interval for a plurality of ETTs to be transmitted in sequence.

In an analogous art, Arsenault discloses a program and system information generator to generate tables for a digital television system packet stream (transmission station 14 shown in fig. 1 is the generator generating the stream shown in fig. 5), the generator comprising an interface to supply issuance-setting information required for setting issuance intervals respectively for a plurality of tables to be transmitted in sequence (the means that determines the timing of the carousels shown in fig. 5, col. 7, lines 23-30); and a non-uniform interval determination unit to determine non-uniform issuance intervals respectively for the tables based upon the issuance-setting information (the means that actually sets the timing information disclosed in col. 7, lines 43-49 for creating the stream shown in fig. 5),wherein among the tables, an issuance interval between any two adjacent instances of an i^{th} table (table 0, in the example given, is 0-6 hours of programming from the current time, and table 1 is 6-24 hours of programming from the current time, however this is entirely flexible and at the discretion of the designer, col. 7, lines 55-59) is determined according to the following equation:

interval(i^{th} table) = root_time + (increment_time)*i,

wherein interval(i^{th} table) is the interval between any two adjacent instances of the i^{th} table, root_time is a predetermined interval for the table corresponding most closely in time to the present, increment_time is a non-zero

scalar and i is a non-zero integer (as shown in col. 7, lines 40-49, between the 0 and 1 tables, wherein i = 1, the interval for table 1 is 30 minutes and the root_time is 5 minutes, which is the interval for table 0, making the increment_time the non-zero scalar 25, thus satisfying the above equation because 30 = 5 + 25*1), providing more efficient broadcasting of program guide data (col. 7, lines 23-25).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by ATSC to include setting the issuance intervals for program guide data tables, respectively, to be non-uniform, wherein an issuance interval between any two adjacent instances of an i^{th} table is determined according to the following equation:

interval(i^{th} table) = root_time + (increment_time)*i,

wherein interval(i^{th} table) is the interval between any two adjacent instances of the i^{th} talbe, root_time is a predetermined interval for the program guide data corresponding most closely in time to the present, increment_time is a non-zero integer, as taught by Arsenault, wherein the program guide data tables are EITs, for the benefit of providing more efficient broadcasting of program guide data.

ATSC and Arsenault fail to disclose setting a uniform issuance interval for a plurality of ETTs to be transmitted in sequence.

In an analogous art, Waldroup teaches sending table data at periodic intervals to maintain current records of said data at a receiver (col. 7, lines 45-60).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by ATSC and Arsenault to send table data at periodic intervals, as taught by Waldroup, wherein the table data are the ETTs disclosed by the ATSC, for the benefit of maintaining current records of said data at a receiver.

Regarding claims 6 and 14, ATSC discloses, for a digital television packet stream having a plurality of different types of tables, a method to determine issuance intervals for a plurality of event information tables (EITs) to be transmitted in sequence (pages 12 and 45), wherein the EIT are assigned to cover different ranges of broadcasting time (page 30), and an issuance interval for an EIT is a period at which the corresponding EIT is issued. ATSC further discloses including extended text tables (ETTs), wherein the ETTs contain program description information associated with the EITs respectively (pages 12-13 and 33).

ATSC fails to disclose a program and system information generator to generate tables for a digital television system packet stream, the generator comprising:

an interface to supply issuance-interval information required for setting issuance intervals respectively for a plurality of event information tables (EITs) to be transmitted in sequence, wherein an issuance interval for an EIT is a period at which the correspond EIT is issued, and the issuance-interval setting information is an assignment of each of the EITs to cover one of different ranges of broadcasting time; and

an interval determination unit to determine non-uniform issuance intervals respectively for the tables based upon the issuance-interval setting information, and to determine a uniform issuance interval for a plurality of ETTs to be transmitted in sequence,

wherein among the EITs, the issuance interval for a EIT covering a range of broadcasting time nearer a current time is set to be less than the issuance interval for a EIT covering a range of broadcasting time further in the future.

In an analogous art, Arsenault discloses a program and system information generator to generate tables for a digital television system packet stream (transmission station 14 shown in fig. 1 is the generator generating the stream shown in fig. 5), the generator comprising:

an interface to supply issuance-interval information required for setting issuance intervals respectively for a plurality of tables to be transmitted in sequence (the means that determines the timing of the carousels shown in fig. 5, col. 7, lines 23-30), wherein an issuance interval for a table is a period at which the correspond table is issued, and the issuance-interval setting information is an

assignment of each of the tables to cover one of different ranges of broadcasting time (col. 7, lines 43-49); and

a non-uniform interval determination unit to determine non-uniform issuance intervals respectively for the tables based upon the issuance-interval setting information (the means that actually sets the timing information disclosed in col. 7, lines 43-49 for creating the stream shown in fig. 5),

wherein among the tables, the issuance interval for a table covering a range of broadcasting time nearer a current time is set to be less than the issuance interval for a table covering a range of broadcasting time further in the future (col. 7, lines 23-67), providing more efficient broadcasting of program guide data (col. 7, lines 23-25).

It would have been obvious at the time to a person of ordinary skill in the art to modify ATSC to include a program and system information generator to generate tables for a digital television system packet stream, the generator comprising:

an interface to supply issuance-interval information required for setting issuance intervals respectively for a plurality of tables to be transmitted in sequence, wherein an issuance interval for a table is a period at which the correspond table is issued, and the issuance-interval setting information is an assignment of each of the tables to cover one of different ranges of broadcasting time; and

a non-uniform interval determination unit to determine non-uniform issuance intervals respectively for the tables based upon the issuance-interval setting information,

wherein among the tables, the issuance interval for a table covering a range of broadcasting time nearer a current time is set to be less than the issuance interval for a table covering a range of broadcasting time further in the future, as taught by Arsenault, wherein the tables of program guide data are EITs as disclosed by ATSC, for the benefit of providing more efficient broadcasting of program guide data.

ATSC and Arsenault fail to disclose determining a uniform issuance interval for a plurality of ETTs to be transmitted in sequence.

In an analogous art, Waldroup teaches sending table data at regular periodic intervals to maintain current records of said data at a receiver (col. 7, lines 45-60).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by ATSC and Arsenault to send table data at periodic intervals, as taught by Waldroup, wherein the table data are the ETTs disclosed by the ATSC, for the benefit of maintaining current records of said data at a receiver.

Regarding claim 11, ATSC, Arsenault, and Waldroup disclose the generator of claim 6, wherein said PSIP generator is embodied in the form of a

processor running software (the generator is a digital computer system for receiving, generating, multiplexing, and broadcasting digital data streams, including the electronic program guide data, Arsenault, col. 5, lines 19-41).

Regarding claim 12, ATSC, Arsenault, and Waldroup disclose the generator of claim 11, but fail to disclose said software is writing in the computer language Java.

Using the computer language Java is notoriously well known in the art, as the Java language has the advantages of being a portable, cross-platform, object oriented software language.

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the generator of ATSC, Arsenault, and Waldroup to include said software is written in the computer language java, for the benefits of using a software language that is object oriented, portable, and platform independent, which simplifies the design and implementation of said software.

Regarding claims 15 and 17, ATSC, Arsenault, and Waldroup disclose the method and generator of claims 1 and 6, wherein the EITs include EIT-0, EIT-1, and EIT-2 (as shown in fig. 5.1 in ATSC).

Regarding claims 16 and 18, ATSC, Arsenault, and Waldroup disclose the method and generator of claims 15 and 17, wherein the issuance intervals are

set respectively for EIT-0, EIT-1, and EIT-2 to increase as the EIT table number increases (Arsenault, col. 7, lines 55-59).

Regarding claims 19 and 21-27, ATSC discloses, for a digital television packet stream having a plurality of different types of tables, a method to determine issuance intervals for a plurality of event information tables (EITs) to be transmitted in sequence (pages 12 and 45, including EIT-0, EIT-1, and EIT-2, see fig. 5.1), wherein the EIT are assigned to cover different ranges of broadcasting time (page 30), and an issuance interval for an EIT is a period at which the corresponding EIT is issued. ATSC further discloses including extended text tables (ETTs), wherein the ETTs contain program description information associated with the EITs respectively (pages 12-13 and 33, including ETT-0, ETT-1, and ETT-2, see fig. 5.2).

ATSC fails to disclose a method and program and system information generator for determining transmission cycles of a group of EITs, the method comprising:

setting the transmission cycles of the groups of EITs to be non-uniform with respect to each other, based on closeness in coverage time to which each EIT in the group is assigned, to a current broadcasting time, wherein among the group of EITs, the transmission cycle of an EIT assigned to a coverage time nearer the current time is set to be less than the transmission cycle of an EIT

assigned to a coverage time further in the future from the current broadcasting time; and setting a uniform transmission cycle of a group of ETTs.

Arsenault discloses a method and program and system information generator (transmission station 14 shown in fig. 1 is the generator generating the stream shown in fig. 5) for determining transmission cycles of a group of tables (fig. 5), the method comprising:

setting the transmission cycles of the groups of tables to be non-uniforms with respect to each other, based on closeness in coverage time to which each table in the group is assigned, to a current broadcasting time, wherein among the group of tables, the transmission cycle of a table assigned to a coverage time nearer the current time is set to be less than the transmission cycle of a table assigned to a coverage time further in the future from the current broadcasting time (col. 7, lines 23-67), providing more efficient broadcasting of program guide data (col. 7, lines 23-25).

It would have been obvious at the time to a person of ordinary skill in the art to modify ATSC to include a method and program and system information generator for determining transmission cycles of a group of tables, the method comprising setting the transmission cycles of the groups of tables to be non-uniforms with respect to each other, based on closeness in coverage time to which each table in the group is assigned, to a current broadcasting time, wherein among the group of tables, the transmission cycle of a table assigned to a coverage time nearer the current time is set to be less than the transmission

cycle of a table assigned to a coverage time further in the future from the current broadcasting time, as taught by Arsenault, wherein the tables of program guide data are EITs as disclosed by ATSC, for the benefit of providing more efficient broadcasting of program guide data.

ATSC and Arsenault fail to disclose setting a uniform transmission cycle of a group of ETTs.

In an analogous art, Waldroup teaches sending table data at regular periodic intervals to maintain current records of said data at a receiver (col. 7, lines 45-60).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by ATSC and Arsenault to send table data at periodic intervals, as taught by Waldroup, wherein the table data are the ETTs disclosed by the ATSC, for the benefit of maintaining current records of said data at a receiver.

Regarding claims 20, ATSC, Arsenault, and Waldroup disclose the method of claim 19, wherein the issuance intervals are set respectively for EIT-0, EIT-1, and EIT-2 to increase as the EIT table number increases (Arsenault, col. 7, lines 55-59).

Conclusion

6. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

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Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dominic D. Saltarelli whose telephone number is (571) 272-7302. The examiner can normally be reached on Monday - Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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DS

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